

REMARKS

Favorable reconsideration of this application as presently amended is respectfully requested. Claims 26-41 are pending. Claims 42-49 have been canceled. Applicants reserve the right to file divisional applications for the subject matter covered by the canceled claims.

In the outstanding Office Action, the Examiner (1) objected to the title; (2) rejected claims 36 and 39 under 35 U.S.C. § 112, second paragraph; (2) rejected claims 26, 27 and 32 under 35 U.S.C. § 102(b) as allegedly anticipated by U.S. Patent No. 5,186,046A to Gouterman *et al.* (hereinafter "*Gouterman*") (3) rejected claim 31 is rejected under 35 U.S.C. § 103(a) as being unpatentable over *Gouterman*; and (4) Claims 28-30 and 33-40 are rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over *Gouterman* in view of Barney *et al.*, U.S. Patent Publication No. 2002/0110180 A1)(hereinafter "*Barney*").

With regard to the title, Applicants have amended the title as suggested by the Examiner and respectfully request that the Examiner reconsider and withdraw the objection to the title.

With regard to the rejection of claims 36 and 39 under 35 U.S.C. §112, second paragraph, Applicants have amended claims 36 and 39. Applicants, accordingly, respectfully request that the rejections under 35 U.S.C. § 112, second paragraph be reconsidered and withdrawn.

With regard to the rejection of independent claim 33 under 35 U.S.C. §103(a), Applicants respectfully request that the Examiner reconsider and withdraw the rejection for at least the following reasons. Independent claim 33 recites as follows:

33. A method of illuminating a rotary blade comprising:
applying a passively charged photoluminescent paint
to a rotary blade; and
sealing said passively charged photoluminescent
paint with a topcoat sealer.

In rejecting claim 33, the Examiner recognized that *Gouterman* fails to teach sealing a passively charged photoluminescent paint with a top coat sealer. Instead, the Examiner asserted that the application of a sealer coat would have been obvious. *See*, Office Action at 5. No support was provided by the Examiner for this statement. Applicants accordingly respectfully submit that the Examiner has failed to establish a *prima facie* obviousness rejection for at least the reason that the Examiner has identified no citation in the prior art disclosing sealing a passively charged photoluminescent paint applied to a rotary blade with a top coat sealer. *See* MPEP 2143.01 (to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *Citing In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)). Applicants accordingly respectfully request that the Examiner withdraw the rejection for at least this reason.

Applicants also respectfully disagree with the Examiner that it would be obvious to apply a top coat sealer to the system disclosed by *Gouterman* for at least the reason that applying a top coat sealer to the system of *Gouterman* would render *Gouterman* unsatisfactory for its intended purpose. *See*, MPEP 2413.01 (If proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *Citing, In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984))

Gouterman is directed to a method for measuring the pressure of an oxygen containing gas on an aerodynamic surface by oxygen quenching of luminescence of

molecular sensors. *See, Gouterman* at Abstract. *Gouterman* discloses a method in which an “oxygen-sensitive luminescent film” is applied to a surface for pressure mapping and mapping of the surface. *See, Gouterman* at col. 6 lns. 4-6. This oxygen-sensitive luminescent film is disclosed by *Gouterman* as including luminescent molecules (referred to as “sensors” by *Gouterman*) that have different dependencies on temperature and oxygen pressure. *See, Gouterman* at Abstract and col. 2 lns. 14-18. Further, *Gouterman* discloses that this oxygen-sensitive luminescent film “must be sufficiently oxygen permeable so that an oxygen-containing gas can quench luminescence of the sensors contained in the film during pressure measurements ...” *See, Gouterman* at col. 7 lns 25-31 (emphasis added). The oxygen-sensitive luminescent film is then irradiated while an oxygen-containing gas is in contact with the film. *See, Gouterman* at col. 10 lns 14-16. Because the luminescent molecules are sensitive to oxygen pressure, the intensity of the luminescence of the luminescent molecules can then be detected and processed to determine the pressure of the oxygen-containing gas. *See, Gouterman* at col. 10 lns 16-22.

Accordingly, for the system of *Gouterman* to work for its intended purpose, the oxygen-containing gas must be able to contact the luminescent molecules. Application of a top coat sealer to the luminescent films of *Gouterman*, however, would hinder the oxygen-containing gas from being able to reach the luminescent molecules and thus render the system of *Gouterman* unsatisfactory for its intended purpose. Applicants accordingly respectfully submit that because sealing the luminescent film of *Gouterman* with a top coat sealer would render it unsatisfactory for its intended purpose, the rejection of claim 33 is improper.

Accordingly, Applicants respectfully submit that *Gouterman* neither teaches nor suggests “sealing said passively charged photoluminescent paint with a topcoat sealer,” as

recited by independent claim 33. Applicants, therefore, respectfully request that the Examiner reconsider and withdraw the rejection of claim 33 for at least this reason.

Independent claim 38, as amended, recites, in part, “sealing said passively charged photoluminescent paint with a topcoat sealer.” Applicants, accordingly, respectfully submit that independent claim 38 is allowable over the cited references for at least similar reasons to those discussed above with reference to independent claim 33.

Independent claim 41 recites, in part, “a substantially transparent topcoat sealer disposed above at least a portion of said passively charged photoluminescent coat.” Applicants, accordingly, respectfully submit that independent claim 41 is allowable over the cited references for at least similar reasons to those discussed above with reference to independent claim 33.

Independent claim 26, as amended, recites, in part, “wherein the photoluminescent paint when activated has an extinction time of greater than or equal to 5.5 hours.” In rejecting claim 26, the Examiner relied on *Gouterman* for allegedly disclosing the application of a photoluminescent paint to a rotor blade. *See*, Office Action at 4. *Gouterman*, however, discloses using a phosphor with a lifetime in the range of 10^{-4} to 10 second. *See*, *Gouterman* at col. 2 lines 8-10. For example, *Gouterman* discloses using a phosphorescent porphyrin with a lifetime of approximately 100 microseconds. Using a photoluminescent paint with an extinction time measured in terms of hours versus one measured in terms of seconds or microseconds would be impractical in the system of *Gouterman*.

Applicants therefore respectfully submit that *Gouterman* fails to teach or suggest “wherein the photoluminescent paint when activated has an extinction time of greater than or equal to 5.5 hours,” as recited by amended independent claim 26. Applicants therefore

respectfully request that the Examiner reconsider and withdraw the rejection to claim 26 for at least this reason.

Independent claim 32, as amended, recites, in part, “wherein the photoluminescent paint when activated has an extinction time of greater than or equal to 5.5 hours.” Applicants accordingly respectfully submit that independent claim 32 is allowable for at least similar reasons to those discussed above with reference to independent claim 26.

Applicants note that in the Conclusion section of the Office Action the Examiner stated that Applicants are required to identify an explicit citation in Applicants’ specification supporting any amended limitations. *See*, Office Action at 6. The portions of the MPEP cited by the Examiner, however, include no such requirement, nor has the Examiner identified any federal regulation or statute requiring such an explicit citation. Rather, MPEP §2163.04 places the burden on the Examiner as to whether the written description requirement is met. However, in the interests of expediting the Application, Applicants respectfully identify that, for example, paragraphs 27 and 31 provide support for the amendments to independent claims 26 and 32.

The dependent claims incorporate all of the subject matter of their respective independent claims and add additional subject matter which makes them *a fortiori* independently patentable over the art of record. Accordingly, Applicants respectfully request that the outstanding rejections of the dependent claims be reconsidered and withdrawn for at least this reason.

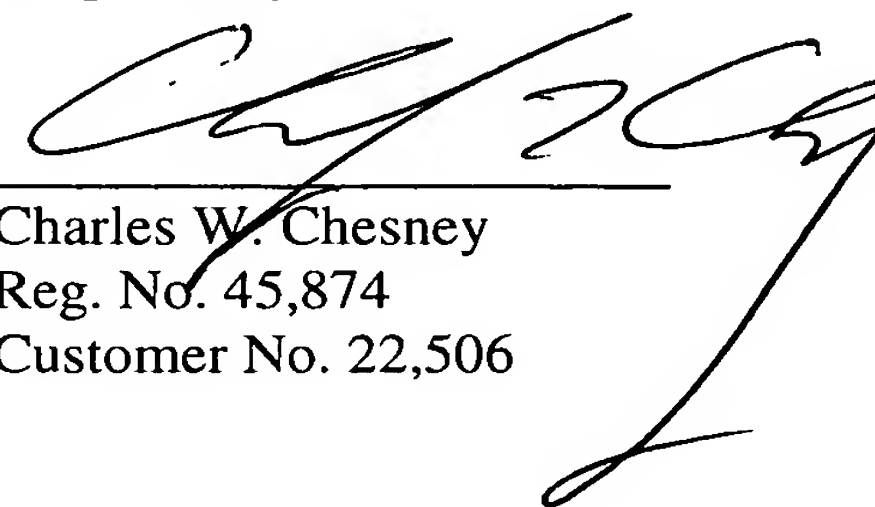
Additionally, Applicants respectfully note that the Examiner has failed to identify any support in any cited reference for allegedly disclosing the limitations of many of Applicants’ dependent claims, such as, for example, dependent claims 28, 29, 30, 35, 37,

39, and 40. Applicants accordingly respectfully request that the Examiner reconsider and withdraw the rejection to these dependent claims for at least this additional reason.

If the Examiner has any questions or concerns regarding the present response, the Examiner is invited to contact Charles W. Chesney at 703-591-2664, Ext. 2004.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance, and favorable action is respectfully solicited.

Respectfully submitted,



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February 2, 2007